



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/799,685	03/15/2004	Takashi Ito	0649-2376PUS1	8648
2292 7590 03/17/2011 BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747				
EXAMINER PIERY, MICHAEL T				
ART UNIT		PAPER NUMBER		
1742				
NOTIFICATION DATE		DELIVERY MODE		
03/17/2011		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

### Office Action Summary

**Application No.**

10/799,685

**Applicant(s)**

ITO ET AL.

**Examiner**

MICHAEL T. PIERY

**Art Unit**

1742

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 December 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3 and 5-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 March 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-945)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**Claim Rejections - 35 USC § 103**

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

2. Claims 1-3 and 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mashige et al. (US 5,604,549) alone or alternatively in view of Ishii et al. (US 6,008,904).

Regarding claim 1, Mashige et al. teaches a method including designing by using a plurality of optical parameters a temporary optical device for optimizing a form so as to exhibit

the desirable wavefront aberration (column 9, lines 57-64); making according to the optimized form of the optical device a temporary molding die for molding the optical device (S4 of figure 6 incorporates the first temporary molding die); molding a first temporary optical device (column 9, lines 65-68); measuring a wavefront of the first temporary optical device and calculating a plurality of wavefront aberration amounts for a plurality of divided wavefront areas of the first temporary optical device (column 10, lines 4-13); calculating correction wavefront aberration amounts (column 10, lines 13-22); designing a second temporary optical device for optimizing a form to exhibit a wavefront aberration with the correction wavefront aberration amounts (column 10, lines 16-22) without using a table prepared beforehand (column 3, lines 38-42); and designing according to the optimized form a normal molding die for molding a normal optical device (column 10, lines 26-28). It is interpreted that Mashige teaches measuring and correcting for a plurality of wavefront aberrations. Alternatively, Ishii teaches interferometers (the measurement device of Mashige) are used to measure a plurality of wavefront aberrations (column 7, lines 44-58). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the process of Mashige to correct multiple wavefront aberrations because correction of aberrations results in a more precise lens (column 1, lines 9-13).

Regarding claim 2, Mashige teaches measuring a wavefront aberration of the molded optical device and calculating the wavefront aberration amount and recalculating the correction wavefront aberration amount when the wavefront aberration amount has a value greater than a predetermined reference value and repeating until the value is satisfactory (figure 49).

Regarding claim 3, Mashige teaches using an interferometer (column 9, lines 25-30).

Regarding claims 5 and 6, Mashige teaches the optical device is aspheric lens (column 1, lines 9-13).

Regarding claim 7, Mashige teaches the molding die is used for press molding (column 1, lines 9-13).

### **Response to Arguments**

Applicant's arguments filed 16 December 2010 have been fully considered but they are not persuasive.

Applicant argues that Mashige merely discloses calculating a certain deviation value and correcting faces of the mold members, not designing a second temporary optical device. The examiner disagrees. Mashige teaches running a computer model that accounts for numerous variables to obtain an ideal design value (column 17, line 34-column 18 line 5). The ideal design value is the design of the second optical device because this design value is different from the design value that produced the initial optical device. The designing of the normal molding die occurs when the calculated design value is input into the grinding machine (column 10, lines 22-28).

Applicant argues that Ishii is silent about calculating a plurality of wavefront aberration amounts for a plurality of divided wavefront areas. The examiner notes that Ishii was relied upon in the alternative and it is still the examiner's position that Mashige teaches measuring and correcting for a plurality of wavefront aberration amounts for a plurality of divided wavefront areas.

### **Conclusion**

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **MICHAEL T. PIERY** whose telephone number is (571)270-5047. The examiner can normally be reached on M-Th 8:30-7.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson can be reached on (571) 272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael T Piery/  
Examiner, Art Unit 1742

/Monica A Huson/  
Primary Examiner, Art Unit 1742